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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION **USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

As the below named inventor	s), I/we declare that:				
This declaration is directed to					
	The attached applica	tion, or			
	Application No	_, filed on,			
	as amended on	(if applicable);			
I/we believe that I/we am/are for which a patent is sought;	the original and first inv	ventor(s) of the subject matter which is claimed and			
I/ we have reviewed and ur claims, as amended by any a	derstand the contents mendment specifically	of the above-identified application, including the referred to above;			
known to me/us to be materia	al to patentability as def ween the filing date of	States Patent and Trademark Office all information fined in 37 CFR 1.56, including material information of the prior application and the National or PCT plication, if applicable; and			
All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.					
FULL NAME OF INVENTOR(S)				
Inventor one Bevan Star		Date: 4/13/0 / -			
Signature: R Dr	56	Citizen of: United States			
Inventor two Richard Ro	th 2	Date:			
Signature: Kenny		Citizen of: United States			
Inventor three		Oate:			
Signature:		Citizen of:			
Inventor four		Date:			
Signature:		Citizen of:			
Additional inventors are being	named on addition	nal form(s) attached hereto.			

Burden Hour Statement: This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is used by the public to file (and the PTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This form is estimated to take 1 minute to complete. This time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231. DE 7037404 v1

PTO/S8/81 (10-00)
Approved for use through 10/31/2002. OMB 0651-0035
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POWER OF ATTORNEY OR **AUTHORIZATION OF AGENT**

Application Number	Not Yet Assigned	
Filing Date	Not Yet Assigned	
First Named Inventor	Staple	
Group Art Unit	Not Yet Assigned	
Examiner Name	Not Yet Assigned	
Attorney Docket Number	19930-002500US	

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as my/our attorney(s) or agent(s) to pro- Trademark Office connected therewith.	secute the application is	enuned above, and to	transact all business in	the Patent and
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I am the:				
Applicant/Inventor.	•	•		
Assignee of record of the entire in	terest. See 37 CFR 3.7	71.		·
Certificate under 37 CFR 3.73(b) i	s enclosed. (Form PTO	/SB/96).	-	
s	IGNATURE of Applica	nt or Assignee of Rec	ord	<u>-</u>
Name Network Photonics, Inc.,	by Steven Georgis, Pre	sident		
Signature Signature	En			
Date 4-	13-01			
NOTE: Signatures of all the inventors Submit multiple forms if more than one	or assignees of record	of the entire interest	or their representative	e(s) are required.
Submit multiple forms it more than one	e signature is required			-

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any Comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS: SEND TO: Assistant Commissioner for Patents, Washington, DC 20231. DE 7037405 v1

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT	UNDER 37 CFR 3.73(b)
Applicant/Patent Owner: Bevan Staple et al.	
Application No./Patent No.: Not Yet Assigned	Filed/Issue Date: Not Yet Assigned
- Entitled: MEMS-BASED NONCONTACTING FREE-S	SPACE OPTICAL SWITCH
Network Photonics, Inc, a	corporation
(Name of Assignee) (Ty	pe of Assignee, e.g., corporation, partnership, university, government agency, etc.)
states that it is:	
 the assignee of the entire right, title, and 	interest; or
2. an assignee of an undivided part interes	
in the patent application/patent identified above by vir	tue of either:
A. An assignment from the inventor(s) of the pate recorded in the Patent and Trademark Office a attached.	nt application/patent identified above. The assignment was Reel, or for which a copy thereof is
OR ·	·
B. A chain of title from the inventor(s), of the pate shown below:	nt application/patent identified above, to the current assignee as
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2. From:	To :
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Reel, Frame, or for which a	
☐ Additional documents in the chain of title	are listed on a supplemental sheet.
*	
Copies of assignments or other documents in the	
must be submitted to Assignment Division in accorded in the records of the USPTO. See MPER	nent document or a true copy of the original document) rdance with 37 CFR Part 3, if the assignment is to be 2 302.8]
The undersigned (whose title is supplied below) is en	powered to sign this statement on behalf of the assignee.
<u>4-13-01</u>	Signature
	Steven Georgis
•	Typed or printed name
	President
	Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



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ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

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SEPTEMBER 27, 2001

PTAS

TOWNSEND AND TOWNSEND AND CREW LLP PATRICK M. BOUCHER
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111

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RECORDATION DATE: 07/03/2001

REEL/FRAME: 012000/0533

NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS):

ASSIGNOR:

STAPLE, BEVAN

DOC DATE: 04/13/2001

ASSIGNOR:

ROTH, RICHARD

DOC DATE: 04/13/2001

ASSIGNEE:

NETWORK PHOTONICS, INC. 4775 WALNUT STREET BOULDER, COLORADO 80301

SERIAL NUMBER: 09899002

PATENT NUMBER:

FILING DATE: 07/03/2001

ISSUE DATE:

MARCUS KIRK, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

FORM PTO-1619A Expires 06/30/99 OMB 0651-0027

07-18-2001



U.S. Department of Commerce Patent and Trademark Office **PATENT**

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Name (line 1)	Bevan Staple	☐ Mark if additional nam	les of conveying pa	Execution Date Month Day Year 04 13 01
Name (line 2)				
Second Party		•	·	Execution Date Month Day Year
Name (line 1)	Richard Roth			04 13 01
Name (line 2)		18990	02	
Receiving Party		Mark if addi	tional names of re-	ceiving parties attached
Name (line 1)	Network Photonics, Inc.	· · · · · · · · · · · · · · · · · · ·		If document to be recorded is an assignment and the
Name (line 2)				receiving party is not domiciled in the United State
Address (line 1)	4775 Walnut Street			an appointment of a domesti representative is attached. (Designation must be a
Address (line 2)				separate document from Assignment.)
Address (line 3)	Boulder	СО		0301
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Commissioner of Patents and Trademarks, Box Assignments , Washington, D.C. 20231



U.S. Department of Commerce Page 2 Patent and Trademark Office FORM PTO-1619B **PATENT** Expires 06/30/99 OMB 0651-0027 (303) 571-4000 Correspondent Name and Address Area Code and Telephone Number Patrick M. Boucher Address (line 1) Townsend and Townsend and Crew LLP Address (line 2) Two Embarcadero Center Address (line 3) Eighth Floor Address (line 4) San Francisco, CA 94111 **Pages** Enter the total number of pages of the attached conveyance document including any attachments Application Number(s) or Patent Number(s) Mark if additional numbers attached. Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number(s) If this document is being filed together with a <u>new Patent Application</u>, enter the date the patent application was Month Day Year 04 13 01 signed by the first named executing inventor. Patent Cooperation Treaty (PCT) PCT PCT PCT **Enter PCT application number** only if a U.S. Application Number has not been assigned. PCT PCT PCT **Number of Properties** # 1 Enter the total number of properties involved. Fee Amount for Properties Listed (37 CFR 3.41): \$ 40 Fee Amount **Method of Payment:** Enclosed [Deposit Account **Deposit Account** Enter for payment by deposit account or if additional fees can be charged to the account.) 20-1430 **Deposit Account Number:** Authorization to charge additional fees: No 🗌 Yes 🗌 Statement and Signature To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein. Patrick M. Boucher (Reg. No. 44,037)

Signature

Name of Person Signing

Attorney Docket No.: 19930-002500US

ASSIGNMENT OF PATENT APPLICATION:

JOINT

WHEREAS, Bevan Staple, of 2424 9th Avenue, Apartment 7205, Longmont, CO, 80503, and Richard Roth, of 1947 Oak Avenue, Boulder, CO 80304, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention:

MEMS-BASED NONCONTACTING FREE-SPACE

OPTICAL SWITCH

Date(s) of execution of Declaration: April 13, 2001

Filing Date:

/ /

Application No.:

; and

WHEREAS, Network Photonics, Inc., of 4775 Walnut Street, Boulder, CO, 80301, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

Assignment Attorney Docket No.: 19930-002500US Page 3	
Dated: Apr. 13, 2001 Richard Roth	
STATE OF COLORADO)	
COUNTY OF Boulder) ss.	
On April 13, 2001, before me, Kathy L. Gonzales personally appeared Richard Roth, personally known to the (or proved to me on the bas satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument person, or the entity upon behalf of which the person acted, executed the instrument.	o me
WITNESS my hand and official seal.	
My Commission Expires April 7, 2004 My Commission Expires: Boulder CO 80301	

DE 7037413 v1

Assignment Attorney Docket No.: 19930-002500US

Page 2

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 4/13/01	Bevan Staple
STATE OF COLORADO) ss.	
personally appeared Bevan Staple satisfactory evidence) to be the person whose nar	, before me, <u>Kathy L. Gonzales</u> , personally <u>known</u> to me (or proved to me on the basis of me is subscribed to the within instrument, and acknowledged to me ized capacity, and that by <u>his/her</u> signature on the instrument the son acted, executed the instrument.
WITNESS my hand and official seal.	
My Commission Expires April 7, 2004 My Commission Expires:	NOTARY PUBLIC U 4775 Walnut Street Boulder, CO 80301



兀卫 29, 2003

TOWNSEND AND TOWNSEND AND CREW LLP DAVID N. SLONE TWO EMBARCADERO CENTER, 8TH FLOOR SAN FRANCISCO, CA 94111-3834

UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

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RECORDATION DATE: 07/25/2003

REEL/FRAME: 013828/0575

NUMBER OF PAGES: 11

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

NETWORK PHOTONICS, INC.

DOC DATE: 06/17/2003

ASSIGNEE:

PTS CORPORATION, A DELAWARE CORPORATION 101 INNOVATION DRIVE

SAN JOSE, CALIFORNIA -95134

SERIAL NUMBER: 10148710

PATENT NUMBER:

SERIAL NUMBER: 10278182

PATENT NUMBER:

SERIAL NUMBER: 09551256

PATENT NUMBER:

SERIAL NUMBER: 09658158

PATENT NUMBER:

FILING DATE: 11/18/2002

ISSUE DATE:

FILING DATE: 10/21/2002

ISSUE DATE:

FILING DATE: 04/18/2000

ISSUE DATE:

FILING DATE: 09/08/2000

ISSUE DATE:

013828/0575 PAGE 2

SERIAL NUMBER: 09747064 FILING DATE: 12/20/2000

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10241105 FILING DATE: 09/10/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09706489 FILING DATE: 11/03/2000

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10076182 FILING DATE: 02/12/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10171434 FILING DATE: 06/12/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 603 63724 FILING DATE: 03/11/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10243924 FILING DATE: 09/12/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09782882 FILING DATE: 02/13/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09859069 FILING DATE: 05/15/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10161838 FILING DATE: 06/03/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 60252784 FILING DATE: 11/22/2000

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09799916 FILING DATE: 03/05/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899013 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899002 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899001 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10300438 FILING DATE: 11/19/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 10087040 FILING DATE: 02/28/2002

PATENT NUMBER: ISSUE DATE:

SERIAL NUMBER: 09899014 FILING DATE: 07/03/2001

PATENT NUMBER: ISSUE DATE:

013828/0575 PAGE 3

SERIAL NUMBER: 09898988

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SERIAL NUMBER: 09899104

PATENT NUMBER:

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PATENT NUMBER: 6600591

SERIAL NUMBER: 09954662

PATENT NUMBER:

SERIAL NUMBER: 10216600

PATENT NUMBER:

SERIAL NUMBER: 09941325

PATENT NUMBER:

SERIAL NUMBER: 10093844

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PATENT NUMBER:

SERIAL NUMBER: 09992087

PATENT NUMBER:

SERIAL NUMBER: 09992849

PATENT NUMBER:

SERIAL NUMBER: 10118070

PATENT NUMBER:

SERIAL NUMBER: 10099392

PATENT NUMBER:

SERIAL NUMBER: 10098805

PATENT NUMBER:

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PATENT NUMBER:

SERIAL NUMBER: 10808789

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SERIAL NUMBER: 10095794

PATENT NUMBER:

SERIAL NUMBER: 10093843

PATENT NUMBER:

SERIAL NUMBER: 10150810

PATENT NUMBER:

FILING DATE: 07/03/2001

ISSUE DATE:

FILING DATE: 07/06/2001

ISSUE DATE:

FILING DATE: 06/12/2001

ISSUE DATE: 07/29/2003

FILING DATE: 09/12/2001

TSSUE DATE:

FILING DATE: 08/09/2002

ISSUE DATE:

FILING DATE: 08/28/2001

ISSUE DATE:

FILING 'DATE: 03/08/2002

ISSUE DATE:

FILING DATE: 10/23/2002

ISSUE DATE:

FILING DATE: 11/12/2001

ISSUE DATE:

FILING DATE: 11/12/2001

ISSUE DATE:

FILING DATE: 04/05/2002

ISSUE DATE:

FILING DATE: 03/13/2002

ISSUE DATE:

FILING DATE: 03/13/2002

ISSUE DATE:

FILING DATE: 11/26/2002

ISSUE DATE:

FILING DATE:

ISSUE DATE:

FILING DATE: 03/11/2002

ISSUE DATE:

FILING DATE: 03/08/2002

ISSUE DATE:

FILING DATE: 05/17/2002

ISSUE DATE:

013828/0575 PAGE 4

SERIAL NUMBER: 10126189

PATENT NUMBER:

SERIAL NUMBER: 10401416

PATENT NUMBER:

SERIAL NUMBER: 10147181

PATENT NUMBER:

SERIAL NUMBER: 10242213

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SERIAL NUMBER: 10262404

PATENT NUMBER:

SERIAL NUMBER: 09442061

PATENT NUMBER: 6501877

SERIAL NUMBER: 09745760

PATENT NUMBER: 6542657

SERIAL NUMBER: 09745459

PATENT NUMBER: 6535664

SERIAL NUMBER: 09615300

PATENT NUMBER: 6449096

SERIAL NUMBER: 09669758

PATENT NUMBER: 6517734

SERIAL NUMBER: 09748687

PATENT NUMBER: 6490089

SERIAL NUMBER: 06275888

PATENT NUMBER: 4381387

SERIAL NUMBER: 09837362

PATENT NUMBER: 6525352

SERIAL NUMBER: 09899000

PATENT NUMBER: 6535319

SERIAL NUMBER: 09941998

PATENT NUMBER: 6439728

FILING DATE: 04/19/2002

ISSUE DATE:

FILING DATE: 03/28/2003

ISSUE DATE:

FILING DATE: 05/15/2002

ISSUE DATE:

FILING DATE: 09/12/2002

ISSUE DATE:

FILING DATE: 09/30/2002

ISSUE DATE:

FILING DATE: 11/16/1999

: ISSUE DATE: 12/31/2002

FILING DATE: 12/20/2000

ISSUE DATE: 04/01/2003

FILING DATE: 12/20/2000

ISSUE DATE: 03/18/2003

FILING DATE: 07/13/2000

ISSUE DATE: 09/10/2002

FILING DATE: 09/26/2000

·ISSUE DATE: 02/11/2003

• FILING DATE: 12/21/2000

ISSUE DATE: 12/03/2002

FILING DATE: 06/22/1981

ISSUE DATE: 04/26/1983

FILING DATE: 04/18/2001

ISSUE DATE: 02/25/2003

FILING DATE: 07/03/2001

ISSUE DATE: 03/18/2003

FILING DATE: 08/28/2001

ISSUE DATE: 08/27/2002

SHARON LATIMER, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

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NO.272 P.4/14

607/25/2003 700037867

Attorney Docket No. 019930-000000US

	Form Cover Sheet U.S. Department of Commerce				
Pom Provided Title Botton Control of the Part and Trademark					
(Rev. 10-02) DMB No, 0651-0027 (exp. 5/31/2002) PATE	NTS ONLY				
Tab settings ⇔⇔♥ ▼	Y Y Y				
To the Honorable Commissioner of Patents and Tradem	erks. Please record the attached original documents or copy thereof				
1. Name of conveying party(les):	2. Name and address of receiving party(ies)				
Network Photonics, Inc.	Name: PTS Corporation				
Additional name(s) of conveying party(ies) attached? ☐ Yes ☑ No	Internal Address: A Delaware Corporation				
3. Nature of conveyance:	Street Address: 101 Innovation Drive				
· 🛛 Assignment 🔲 Merger	City: San Jose State: CA ZIP: 95134				
Security Agreement Change of Name					
Other.	Additional name(s) and address(es) attached? ☐ Yes ☒ No				
Execution Date: June 17, 2003					
 Application number(s) or patent number(s): 					
If this document is being filed together with a new applicati	on, the execution date of the application is:				
A. Patent Application No(s):	B. Patent No(s):				
10/148,710	6,501,877				
10/278,182	6,542,657				
09/551,256	6,535,664				
09/658,158	6,449,096				
	6,517,734				
09/747,064					
 Name and address of party to whom correspondence concerning document should be mailed: 	Total number of applications and patents involved: 55				
	7. Total fee (37 CFR \$.41):\$2200.00				
Name: David N. Slone					
TOWNSEND AND TOWNSEND AND CREW LL Two Embarcadero Center, 8th Floor	☐ Endosed				
San Francisco, California 94111-3834 (650) 326-2400					
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9. Statement and signature. To the best of my knowledge and belief, the foregoing intits a true copy of the original document.	formation is true and correct and any attached copy				
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	\cdot				
David N. Slone	gura Thone July 25, 2003				
Atty. Reg. No. 28,572	Signature Date				

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Form PTO-1595 Recordation Form Cover Sheet Patents Only Page 2

- Additional name(s) of conveying party(ies): (Continued from Page 1)
- Additional name(s) and address(es) of receiving party(ies): (Continued from Page 1)
- Additional application number(s) or patent number(s): (Continued from Page 1)

A. Patent Applicatio	n No.(s)
10/241,105	
09/706,489	
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10/242,213	•
10/262,404	

B. Patent No.(s) 6,490,089 6,381,387 6,525,352 6,535,319 6,439,728

EXHIBIT 3.02(b)

PATENT ASSIGNMENT

ASSIGNMENT AND TRANSFER OF PATENTS

WHEREAS, Network Photonics, Inc., a Delaware corporation, with offices at 4775 Walnut Street, Boulder, Colorado 80301 ("Assignor") owns certain patent applications and/or registrations, as listed in Exhibit A attached hereto and incorporated herein by this reference ("Patents"); and

WHEREAS, PTS Corporation, a Delaware corporation, with offices at 101 Innovation Drive, San Jose, California 95134 ("Assignee"), desires to acquire all of the right, title and interest of Assignor in, to and under the Patents;

WHEREAS, Assignor and Assignee have entered into a certain Asset Purchase Agreement, dated as of June 17, 2003 ("Assignment Agreement"), assigning, among other things, all right, title and interest in, to and under the Patents and in, to and under the registrations for same from Assignor to Assignee;

NOW, THEREFORE, for good and valuable consideration described in the Assignment Agreement, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby irrevocably sell, assign, transfer and convey unto Assignee all of its right, title and interest in and to the Patents, including all patent applications and divisions, continuations, continuations-in-part, reexaminations, substitutions, reissues, extensions and renewals of the applications and registrations for the Patents (and the right to apply for any of the foregoing); all rights to causes of action and remedies related thereto (including, without limitation, the right to sue for past, present or future infringement, misappropriation or violation of rights related to the foregoing); and any and all other rights and interests arising out of, in connection with or in relation to the Patents throughout the universe, including without limitation all foreign counterparts and foreign equivalents of any of the foregoing.

Assignor authorizes and requests the patent officials in the United States and in any and all foreign jurisdictions to issue any and all letters patent and foreign counterparts or equivalents thereof to PTS Corporation, as assignee of the entire interest of Assignor therein, and covenants that Assignor has full right to convey the entire interest herein assigned and that Assignor has not executed and will not execute any agreements in conflict herewith.

Assignor further agrees, for itself, its successors and assigns, to execute such further documents and to perform such further lawful acts as may reasonably be required to effectuate this assignment.

IN WITNESS WHEREOF, Assignor has caused this assignment to be duly executed by an authorized officer on this 17th day of June, 2003.

Network Photonics, Inc.	
By: 1. M. Jean Jean Steve Centrals Title: 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
STATE OF <u>Colorado</u>) ss.	
On June 17, 2003, before me, the undersigned no State, personally appeared Steve Georgis	otary public in and for said County and
	· · · · · · · · · · · · · · · · · · ·
personally known to me proved to me on the base	e [or] sis of satisfactory evidence
to be the person(s) whose name(s) Steve Georgis acknowledged to me that Steve Georgis execut authorized capacity(ies) and that, by Nis	ed the same in <u>his</u> signature(s) on the instrument, the person(s) o
the entity(ies) upon behalf of which the person(s) acted	executed the instrument.
Witness my hand and official seal. SANO OF COLOR My Commission Expires 04/07/04	Tathy 2. Sanderson April 7, 2004 Kathy L. Sanderson 4715 Walnut Street Boulder, CO 80301

EXHIBIT A

PATENTS

TTC Ref Country				Filing		
ATTY(s) Handling	Title	Inventor	Application No.	Date	Patent No.	Issue Dat
019930-000100	Wavelength Router	Weverka, Robert T.	09/442061	11/16/1999	6501877	12/31/200
US		Roth, Richard S.				
(DNS)			2200622	11/14/2000		<u> </u>
019930-000110 CA	Wavelength Router	Weverka, Robert T.	2389622	11/14/2000		
(DNS)	in .	Georgis, Steven P.	·			
	·	Roth, Richard S.	,			
019930-000110	Wavelength Router	Weverka, Robert T.	00815769.3	11/14/2000		
CN		Georgis, Steven P.			,	
(DNS)	·.	Roth, Richard S.				,
019930-000110	Wavelength Router	Weverka, Robert T.	00983709.7	11/14/2000		
EP .						
(DNS)		Georgis, Steven P.				
		Roth, Richard S.				
019930-000110 JP	Wavelength Router	Weverka, Robert T.	2001-538854	11/14/2000		
(DNS)		Georgis, Steven P.	{			
		Roth, Richard S.	1		,	
019930-000110	Wavelength Router	Weverka, Robert T.	00/31448	11/14/2000		
PC (DNS)	·	Georgis, Steven P.				
(2.13)		Roth, Richard S.				
019930-000110	Wavelength Router	Weverka, Robert T.	_10/148710	5/29/2002		ļ
US .		`				
(DNS)		Georgis, Steven P.		1		
		Roth, Richard S.		,		<u> </u>
019930-000120 US	Wavelength Router	Weverka, Robert T.	10/278182	10/21/2002		
(DNS)		Georgis, Steven P.				
		Roth, Richard S.				
019930-000200 CA	Wavelength Monitor for WDM Systems	Georgis, Steven P.	2406369	3/22/2001		
(DNS)		Weverka, Robert T.	÷			
019930-000200	Wavelength Monitor for WDM	Georgis, Steven P.	1811343.5	3/22/2001		
CN (DNS)	Systems	Weverka, Robert T.				
019930-000200	Wavelength Monitor for WDM	Georgis, Steven P.	01928317.5	3/22/2001	 	
EP	Systems					1
(DNS)	<u></u>	Weverka, Robert T.				
019930-000200 JP	Wavelength Monitor for WDM Systems	Georgis, Steven P.	2001-576415	3/22/2001		
(DNS)		Weverka, Robert T.				

TTC Ref						
Country	Title	Inventor	Application No.	Filing Date	Patent No.	Issue Date
ATTY(s) Handling 019930-000200	Wavelength Monitor for WDM	Georgis, Steven P.	PCT/US01/09442	3/22/2001		13300 0 400
PC	Systems					
(DNS)		Weverka, Robert T.				
019930-000200	Wavelength Monitor for WDM Systems	Georgis, Steven P.	09/551256	4/18/2000		
US	Systems	Weverka, Robert T.			•	
(DNS)	Linear Optical Beam Translator for	Weaver, Samuel P.	09/658158	9/8/2000		·
019930-000500 US	Optical Routing	· ·	03/030130	3101 2 000		
PMB (DNS)		Weverka, Robert T.				
		Roth, Richard S.				
019930-000510 · PC	Linear Optical Beam Translator For Optical Routing	Weaver, Samuel P.	01/28309	9/7/2001		
PMB (DNS)		Weverka, Robert T.				
		Roth, Richard S.				
019930-000600 PC	Binary Switch for an Optical Wavelength Router	Anderson, Robert L	01/50524	12/20/2001		
PMB (DNS)		• •				
· · · · · · · · · · · · · · · · · · ·				12/20/2000	(642/62	4/1/2003
019930-000600 US	Binary Switch for an Optical Wavelength Router	Anderson, Robert L.	09/745760	12/20/2000	6542657	4/1/2003
PMB (DNS)	, and the same of				'	
019930-000700	1X2 Optical Wavelength Router	Anderson, Robert L.	01/50441	12/20/2001		
PC						
PMB (DNS)						
019930-000700 US	1X2 Optical Wavelength Router	Anderson, Robert L.	09/745459	12/20/2000	6535664	3/18/2003
PMB (DNS)	Ì		1			
019930-000800 US	Wavelength Router with Staggered Input-Output Fibers	Anderson, Robert L.	09/747064	12/20/2000		
PMB (DNS) -		Weaver, Samuel P.				<u> </u>
019930-000900	Diffraction Grating with Reduced	Fabiny, Larry	09/615300	7/13/2000	6449096	9/10/200:
US	Polarization-Dependent Loss	C T				
PMB (DNS)		Sarto, Tony	09/669758	9/26/2000	6517734	2/11/200:
019930-000910 US :	Grating Fabrication Process Using Combined Crystalline- Dependent &	Muller, Lilac	09/009/58	9/20/2000	0317734	2/11/200.
. PMB (DNS)	Crystalline-Independent Etching	Amett, Kenneth E.				
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Fabiny, Larry			·	
		Pister, Kristofer S.				
019930-000920 US	Diffraction Grating with Reduced Polarization-Dependent Loss	Fabiny, Larry	09/748687	12/21/2000	6490089	.12/3/200:
PMB (DNS)						l
019930-000930 PC	Diffraction Grating With Reduced Polarization-Dependent Loss	Fabiny, Larry	01/22229	7/11/2001		
PMB (DNS)		Sarto, Tony				
		Muller, Lilac				
	•	Arnett, Kenneth E.				
1		Pisterf, Kristofer				

TTC Ref Country		1	Application No.	Filing Date	Patent No.	Issue Date
ATTY(s) Handling 019930-000940	Title Difffraction Grating With Reduced	Inventor Fabiny, Larry	Application No.	9/10/2002	ratentivo.	122 ne Date
US	Polarization-Dependent Loss	1 401117, 22117)		
PMB (DNS)		Sarto, Tony				
019930-001000 PC	Reduction of Polarization-Dependent Loss from Grating Used in Double-	Fabiny, Larry	PCT/US01/47565	11/2/2001		
DJG PMB (DNS)	Pass Configuration					
DIG FMB (DNS)						
019930-001000	Reduction of Polarization-Dependent	Fabiny, Larry	09/706489	11/3/2000		
US	Loss from Grating Used in Double-	*				
DJG PMB (DNS)	Pass Configuration					
019930-001010	Reduction of Polarization Dependent	Fabiny, Larry	10/076182	2/12/2002		
US	Loss from a Grating Used in Double Pass Configuration					
PMB (DNS)			·			
019930-001020 US	Reduction of Polarization-Dependent Loss in Double Pass Configurations	Silveira, Paulo E. X.	10/171434	6/12/2002		
PMB (DNS)		Sarto, Tony				
·		Fabiny, Larry				
		Voitel, Marko			}	
019930-001100	Variable Wavelength Attenuator for	Weaver, Samuel P.	60/363724	3/11/2002		
US	Spectral Grooming Using					
PMB (DNS)	Micromirror Routing					
019930-001110	Variable Wavelength Attenuator for	Weaver, Samuel P.	PCT/US03/07902	3/11/2003	İ	Ì.
PC	Spectral Grooming and Dynamic Channel Equalization Using	Sarto, Andrew W.				
PMB (DNS)	Micromirror Routing	<u> </u>	10/247074	9/12/2002		·
019930-001110 US	Variable Wavelength Attenuator for Spectral Grooming Using	Weaver, Samuel P.	10/243924	9/12/2002		
PMB (DNS)	Micromirror Routing	Sarto, Anthony W.	·.			
019930-001200	Focal Length Disperation	Weaver, Samuel P.	09/782882	2/13/2001	<u> </u>	
US	Compensation for Field Curvature					
PMB (DNS)		Cahill, Raymond F.				ļ
019930-001300	Athermalization of a Wavelength	Wendland Jr., R.G.	01/24242	7/31/2001		
PC	Routing Element		İ			
DJG (DNS)	() () ()	Wendland Jr., R.G.	09/630817	8/2/2000	6381387	4/30/200
019930-001300 US	Athermalization of a Wavelength Routing Element	wendiano Jr., R.G.	09/030817		030.30	111301200
DJG (DNS)	3					
019930-001400	Hidden Flexure Ultra-Planar Optical	Michalicek, M. A.	09/859069	5/15/2001		
US	Routing Element					
RTB (DNS)					ļ	
019930-002000	Optical Routing Elements	Wendland, Jr., R.G.	10/161838	6/3/2002		ļ
US						
RTB (DNS)	Listed B. D. T.	Muller Liles	60/252784	11/22/2000	 	
019930-002200 US	Method to Reduce Release Time of Micromachined Devices	Muller, Lilac	00/232/84	111222000		
PMB (DNS)		Staple, Bevan				
019930-002210 US	Method to Reduce Release Time of Micromachined Devices	Muller, Lilac	09/837362	4/18/2001	6525352	2/25/200
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TTC Ref Country	Title	Inventor	Application No.	Filing Date	Patent No.	Issue Date
ATTY(s) Handling 019930-002300 US	Method for Reducing Leaching in Metal-Coated MEMS	Staple, Bevan	09/799916	3/5/2001	Tatelle 140.	13306 02(
PMB (DNS)		Miller, David				
		Muller, Lilac				
019930-002400 US	Optical Surface-Mount Lens Cell	Anderson, David Paul	09/899013	7/3/2001		
PMB (DNS)						
019930-002500 US	MEMS-Based, Non-Contacting, Free-Space Optical Switch	Staple, Bevan	09/899002	7/3/2001		
PMB (DNS)	·	Roth, Richard S.	,			
019930-002600 US	Free-Space Optical Wavelength Routing Elements Based on Stepwise	Buzzetta, Victor	09/899000	7/3/2001	6535319	3/18/2003
PMB (DNS)	Controlled Tilting Mirrors	Staple, Bevan				
		Marinelli, David				
019930-002700 US	Two-Dimensional Free-Space Optical Wavelength Routing Element	Buzzetta, Victor	09/899001	7/3/2001		
PMB (DNS)	Based on Stepwise Controlled Tilting Mirrors					
019930-002710 US PMB (DNS)	Two-Diminsional Free-Space Optical Wavelength Routing Element Based on Stepwise Controlled Tilting Mirrors	Buzzetta, Victor	10/300438	11/19/2002		
019930-002800 US	Systems & Methods for Overcoming Stiction	Miller, David	10/087040	2/28/2002		
DMH (DNS)		Muller, Lilac		•		
		Anderson, Robert L.				
019930-003000 US	Methods & Appartus for Providing a Multi-Stop Micromirror	Anderson, David Paul	09/899014	7/3/2001		
DMH (DNS)			ļ		1	
019930-003100 US	Systems & Methods for Overcoming Stiction Using a Lever	Anderson, David Paul	09/898988	7/3/2001	-	
DMH (DNS)						
019930-003200 US	Bistable Mirror with Contactless Stops	Muller, Lilac	09/899004	7/3/2001		
PMB (DNS)					,	
019930-003500 US	Micromirror Array Having Adjustable Angles	Anderson, Robert L.	09/880230	6/12/2001		
PMB (DNS)	,	Staple, Bevan Roth, Richard S.				
010030 003600	Dual-Wave Optical Shared	Wahler, Ronald A.	09/954662	9/12/2001	 	
019930-003600 US	Protection Ring		07/754002	7/12/2001		
PMB (DNS)	<u> </u>	Bortolini, Edward J.	1001((00	9/0/2002		
019930-003700 US	Method & Apparatus for Protecing Wiring & Integrated Circuit Device	Anderson, Robert L.	10/216600	8/9/2002		
WFV (DNS)		Reyes, David			·	

TTC Ref Country ATTY(s) Handling	Title	Inventor	Application No.	Filing Date	Patent No.	lssue Dat
019930-004000	MEMS Die Holder	Roberts, Joseph	09/941325	8/28/2001		
US	,					
PMB (DNS)	C. J. C. V. C.	Copeland, Frederick	09/941998	8/28/2001	6439728	8/27/200
019930-004400 US	Multimirror Stack for Vertical Integration of MEMS Devices in	Copeland, Frederick	09/941996	0/20/2001	0439728	6/2 //200
PMB (DNS)	Two-Position Retroreflectors	•				
019930-004500	Optical Wavelength Cross Connect	Bortolini, Edward J.	10/093844	3/8/2002		
US	Architectures Using Wavelength Routing Elements					
PMB (DNS)	Rosang Siemens	Barthel, Dirk				
		Weverka, Robert T.	•			
		Iraschko, Rainer R.			•	
		Morley, George D.	DCT// 1003/07433	3/10/2003		
019930-004510 PC	Optical Wavelength Cross Connect Architectures Using Wavelength	Bortolini, Edward J.	PCT/US03/07422	3/10/2003		
PMB (DNS)	Routing Elements and Methods For	Barthel, Dirk				}
1110 (5110)	Performing In-Service U	Weverka, Robert T.				
		Iraschko, Rainer R.		1	- .	
•		Morley, George D.			· ·]
019930-004510	Optical Wavelength Cross Connect	Weyerka, Robert T.	10/279388	10/23/2002		· ·
US	Architectures Using Wavelength					
PMB (DNS)	Routing Elements .					
019930-005500	Wavelength Router with a Transmissive Dispersive Element	Fabiny, Larry	09/992087	11/12/2001		
US BMB (DNS)	1130311153146 Dispersive Element	· .			l ·	
PMB (DNS)				ļ ·	ł	
019930-005600	High Efficiency, Low Polarization	Fabiny, Larry	09/992849	11/12/2001	-	
US	Depdendent Loss, Lamellar	, , , , ,				
PMB (DNS)	Diffraction-Grating Profile & Production Process	Arnett, Kenneth E.				<u> </u>
019930-005700	Survivable Ring Transmission	Iraschiko, Rainer R.	10/118070	4/5/2002		
US "	System with Multiple Protection Classes					1
PMB (DNS)	C.1235C3	MacGregor, Michael	ŀ			
		Morley, George David	· ·			
	*	Stamatelakis, Demetr				1
		Wahler, Ronald A.				
019930-005800	One-to-M Wavelength Routing	Cizek, Nicholas C.	10/099392	3/13/2002		
US	Element	Weaver, Samuel Paul				
PMB (DNS)	T. D. Too Wassissat Basis	Cizek, Nicholas C.	10/098805	3/13/2002	 	
019930-005900 US	Two-By-Two Wavelength Routine Element Using One Two- Position	CIZEK, INICHOIAS C.	10/090000	3/13/2002		
G2B PMB (DNS)	MEMS Mirrors					
		*			<u> </u>	
019930-006000	Method for Sub Network Connection	Weverka, Robert T.	10/306826	11/26/2002		1
US	Protection in All Optical Networks		1			
1	i .	1	į.	1	1	1

TTC Ref Country ATTY(s) Handling	Title	Inventor	Application No.	Filing Date	Patent No.	Januar David
019930-006100	Methods for Affirming Switched	Staple, Bevan	10/080789	2/21/2002	1 atent 140.	Issue Dat
US	Status of MEMS Based Devoies	·				
PMB (DNS)		Anderson, Robert L.			-	Ì
019930-007300 PC	Tunable DWDM Demultiplexer	Christopher S., Alaimo	PCT/US03/07899	3/11/2003		
PMB (DNS)		Bortolini, Edward J.				
		DeFrancesco, Marc				
		Honea, Keith				
		Marinelli, David				
		Mechels, Steven	, ,			
	,	Rice, James	.			
		Weverka, Robert T.	İ			
		Kiruluta, Andrew J. M.				,
		Wood, Christopher Stephen				
		Kaliski, Robert W.				
019930-007300	Tunable DWDM Demultiplexer	Christopher S., Alaimo	10/095794	3/11/2002		
US PMP (DNS)		Bortolini, Edward J.				
PMB (DNS)		ì				,
		DeFrancesco, Marc				
		Honea, Keith				
		Marinelli, David				
		Mechels, Steven				
		Rice, James				
•		Weverka, Robert T.			,	ļ
		Kiruluta, Andrew J. M.				
019930-007500 US PMB (DNS)	Methods for Performing In-Service Upgrades of Optical Wavelength Cross Connects	Bortolini, Edward J.	10/093843	3/8/2002		
019930-007900	Bidirectional Wavelength Cross-	Bortolini, Edward J.	.10/150810	5/17/2002	•	<u> </u>
US PMB (DNS)	Connect Architectures Using Wavelength Routing Elements	Barthel, Dirk		·		
		Weverka, Robert T.				
	}	Weaver, Samuel Paul]			
		Silveira, Paulo E. X.	·			
019930-008000 US	Multi-City DWDM Wavelength Link Architectures & Methods for	Alaimo, S.Christophe	10/126189	4/19/2002		ļ
PMB (DNS)	Upgrading	Barthel, Dirk	÷			
•		Morley, George David				
		Bortolini, Edward J.	\			
		Urie, Richard W.				
019930-008100	Optical Routing Mechanism With	KAPLAN, MICHAEL	10/401416	3/28/2003		-
US	Integral Fiber Input/Output					1
PMB (DNS)	Arrangement on MEMS Die	1				

TTC Ref Country ATTY(s) Handling	Title	Inventor	Application No.	Filing Date	Patent No.	Issue Date
019930-008200 US	Variable-Density Optical Cross Connect Architectures & Upgrades	Weverka, Robert T.	10/147181	5/15/2002		
PMB (DNS)	·	Bortolini, Edward J. Urie, Richard W. Clark, Phillip	,			
019930-008300 US PMB (DNS)	Surfactant-Enhanced Protection of Micromechanical Components from Galvanic Degradation	Staple, Bevan	10/242213	9/12/2002		
019930-008400 US PMB (DNS)	Floating Entrance Guard for Preventing Electrical Short Circuits	Miller, David	10/262404	9/30/2002		
019930-008800 US PMB (DNS)	Equipment Monitoring Techniques for Optical Switching & Wavelength Switching Devices & Systems				9	